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SPECIFICATION FOR PLATINUM CRUCIBLE AND LID

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NEW DELHI 110002

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SPECIFICATION FOR PLATINUM CRUCIBLE AND LID

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SPECIFICATION FOR PLATINUM CRUCIBLE AND LID

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 1 March 1971, after the draft finalized by the Precious Metals Sectional Committee had been approved by the Structural and Metals Division Council.

0.2 Platinum crucibles of various forms and capacities are used in laboratories. The purpose of this standard is to stipulate minimum purity of the platinum crucible and lid and rationalize its capacities, dimensions and weights.

0.3 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This specification covers the requirements for purity, finish, design, capacity, dimensions and weights of platinum crucibles (1 to 100 ml) and lid used in the laboratories.

2. PURITY

2.1 The purity of platinum crucible and lid shall not be less than 99·7 percent. Other platinum group metals as impurities shall not be in excess of 0·3 percent, and other metals not more than 0·1 percent. The platinum and platinum group metals may be determined in accordance with IS : 2271-1967†.

3. FINISH

3.1 Platinum crucible and lid shall be free from defects, such as scratches, dents and punctures which may impair their appearance or serviceability.

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*Rules for rounding off numerical values (*revised*).

†Recommended method for spectrographic analysis of platinum.

4. DESIGN, CAPACITY, DIMENSIONS AND WEIGHTS

4.1 The crucible shall be so designed as to have extra thick base to withstand heavy wear and may be with or without reinforced rim (*see* Fig. 1). The lid shall closely fit the crucible (*see* Fig. 2).

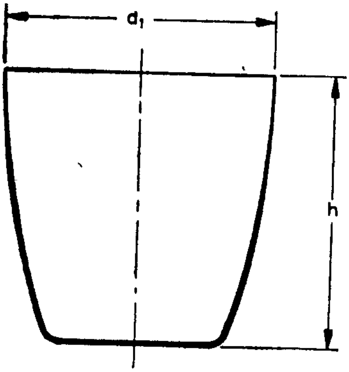

FIG. 1 SHAPE OF PLATINUM CRUCIBLE

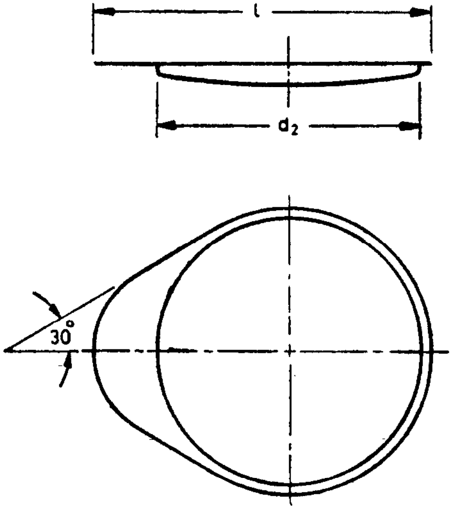

FIG. 2 SHAPE OF PLATINUM LID

4.2 The capacity, dimensions and weights of platinum crucible and lid shall comply with the requirements given in Tables 1 and 2 respectively.

TABLE 1 CAPACITY, DIMENSIONS AND WEIGHT OF PLATINUM CRUCIBLE

CAPACITY	TOP DIAMETER d_1	HEIGHT h	WEIGHT, *Min* Crucible	WEIGHT, *Min* Crucible with Reinforced Rim
(1)	(2)	(3)	(4)	(5)
ml	mm	mm	g	g
1	12	13	2	—
3	17	19	5	—
5	20	22	6	—
10	26	29	8	10
15	29	33	11	13
20	32	36	16	18
25	35	39	20	23
30	37	41	25	28
40	41	46	33	36
50	44	49	42	46
75	50	55	60	65
100	56	62	80	85

NOTE — The ratio of top and bottom diameters of the crucible shall be 10 : 6.

TABLE 2 DIMENSIONS AND WEIGHT OF PLATINUM LID

CAPACITY	DIAMETER d_2	LENGTH l	WEIGHT, *Min*
(1)	(2)	(3)	(4)
ml	mm	mm	g
1	11·7	13·8	0·5
3	16·5	23·5	1·3
5	19·5	27	1·6
10	25	33	2·5
15	28	37	4·0
20	31	40	4·5
25	34	44	5·0
30	36	47	5·5
40	40	52	7·0
50	43	56	8·0
75	49	63	10·0
100	55	71	15·0

4.3 Tolerance

4.3.1 Top diameter of crucible, $d_1 = \pm 1$ mm

4.3.2 Height of crucible, $h = \pm 1$ mm

4.3.3 Diameter of lid, $d_2 = \pm 1$ mm

4.3.4 Length of lid, $l = \pm 1$ mm

4.3.5 Weight of crucible and lid shall not exceed 5 percent of that specified in Tables 1 and 2 respectively.

5. INSPECTION

5.1 Each platinum crucible and lid shall be inspected for its finish, capacity, dimensions and weight.

6. MARKING

6.1 Platinum crucible and lid shall be permanently and legibly marked with the name or trade-mark of the manufacturer.

6.1.1 Platinum crucible and lid may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

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